LISTING OF CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1. (original) A method for associating EKG waveform data with computed tomography image data using a data synchronization scheme comprising:

generating the EKG waveform data using an electrocardiogram device;

operating a computed tomography imaging system so as to create the computed tomography image data;

communicating an exposure marker-in signal to said electrocardiogram device such that said exposure marker-in signal is associated with the EKG waveform data; and

processing the computed tomography image data, the EKG waveform data and said exposure marker-in signal, so as to correlate the EKG waveform data with the computed tomography image data.

2. (original) The method of claim 1, wherein said generating includes operating said electrocardiogram device so as to create the EKG-waveform data, wherein the EKG waveform data is responsive to the cardiac function of a patient.

3. (original) The method of claim 1, wherein said generating includes generating and introducing an event signal to said electrocardiogram device so as to overlay the EKG waveform data with said event signal such that said event signal is associated with the EKG waveform data.

4. (original) The method of claim 1, wherein said communicating an exposure marker-in signal includes generating and introducing said exposure marker-in signal so as to overlay the EKG waveform data with said exposure marker-in signal.

5. (original) The method of claim 1, wherein said electrocardiogram device includes a marker-in input and wherein said electrocardiogram device is communicated with a patient.

6. (original) The method of claim 1, wherein said communicating includes introducing an event signal to said electrocardiogram device so as to associate said event signal with an R-peak event.

7. (original) The method of claim 1, wherein said communicating includes introducing said exposure marker-in signal to said electrocardiogram device so as to associate said exposure marker-in signal with the start of a computed tomography imaging system scan.

8. (original) The method of claim 1, wherein the EKG waveform data includes an R-Peak event, an atrial depolarization event and a ventricular re-polarization event.

9. (original) The method of claim 1, wherein said generating includes generating an event signal responsive to the EKG waveform data.

10. (original) The method of claim 1, wherein said exposure marker-in signal is responsive to said computed tomography imaging system.

11. (original) The method of claim 1, wherein said processing includes processing the computed tomography image data, the EKG waveform data and said exposure marker-in signal so as to associate the EKG waveform data with the computed tomography image data.

12. (original) The method of claim 1, wherein said processing includes storing the computed tomography image data, the EKG waveform data and said exposure marker-in signal using a data storage device.

13. (original) A medium encoded with a machine-readable computer program code for associating EKG waveform data with computed tomography image data using a data synchronization scheme, said medium including instructions for causing a controller to implement a method comprising:

generating the EKG waveform data using an electrocardiogram device;

operating a computed tomography imaging system so as to create the computed tomography image data;

communicating an exposure marker-in signal to said electrocardiogram device such that said exposure marker-in signal is associated with the EKG waveform data; and

processing the computed tomography image data, the EKG waveform data and said exposure marker-in signal, so as to correlate the EKG waveform data with the computer tomography image data.

14. (original) The medium of claim 13, wherein said generating includes operating said electrocardiogram device so as to create the EKG waveform data, wherein the EKG waveform data is responsive to the cardiac function of a patient.

15. (original) The medium of claim 13, wherein said generating includes generating and introducing an event signal to said electrocardiogram device so as to overlay the EKG waveform data with said event signal such that said event signal is associated with the EKG waveform data

16. (original) The medium of claim 13, wherein said communicating an exposure marker-in signal includes generating and introducing said exposure marker-in signal so as to overlay the EKG waveform data with said exposure marker-in signal.

17. (original) The medium of claim 13, wherein said communicating includes introducing an event signal to said electrocardiogram device so as to associate said event signal with an R-peak event.

18. (original) The medium of claim 13, wherein said communicating includes introducing said exposure marker-in signal to said electrocardiogram device so as to associate said exposure marker-in signal with the start of a computed tomography imaging system scan.

19. (original) The medium of claim 13, wherein said generating includes generating an event signal responsive to the EKG waveform data.

20. (original) The medium of claim 13, wherein said exposure marker-in signal is responsive to said computed tomography imaging system.

21. (original) The medium of claim 13, wherein said processing includes processing the computed tomography image data, the EKG waveform data and said exposure marker-in signal so as to associate the EKG waveform data with the computed tomography image data.

22. (original) The medium of claim 13, wherein said processing includes storing the computed tomography image data, the EKG waveform data and said exposure marker-in signal using a data storage device.

23. (original) A method for associating EKG waveform data with image data generated by an imaging system using a data synchronization scheme comprising:

obtaining the imaging system, an electrocardiogram device and an object to be examined;

associating said object with the imaging system and said electrocardiogram device; and

processing the image data and the EKG waveform data using the data synchronization scheme wherein the data synchronization scheme,

generates the EKG waveform data using an electrocardiogram device;

operates the imaging system so as to create the image data;

communicates an exposure marker-in signal to said electrocardiogram device such that said exposure marker-in signal is associated with the EKG waveform data; and

processes the image data, the EKG waveform data and said exposure marker-in signal, so as to correlate the EKG waveform data with the image data.

24. (original) A system for associating EKG waveform data with computed tomography image data using a data synchronization scheme comprising:

a gantry having an x-ray source and a radiation detector array, wherein said gantry defines an object cavity and wherein said x-ray source and said radiation detector array are rotatingly associated with said gantry so as to be separated by said object cavity;

an object support structure movingly associated with said gantry so as to allow communication with said object cavity; and

a processing device having the data synchronization scheme, wherein the data synchronization scheme,

generates the EKG waveform data using an electrocardiogram device;

operates a computed tomography imaging system so as to create the computed tomography image data;

communicates an exposure marker-in signal to said electrocardiogram device such that said exposure marker-in signal is associated with the EKG waveform data; and

processes the computed tomography image data, the EKG waveform data and said exposure marker-in signal, so as to correlate the EKG waveform data with the computer tomography image data.

25. (original) A system for associating EKG waveform data with image data using a data synchronization scheme comprising:

an imaging system;

an object disposed so as to be communicated with said imaging system, wherein said imaging system generates image data responsive to said object; and

a processing device having the data synchronization scheme, wherein the data synchronization scheme,

generates the EKG waveform data using an electrocardiogram device;

operates said imaging system so as to create the image data;

communicates an exposure marker-in signal to said electrocardiogram device such that said exposure marker-in signal is associated with the EKG waveform data; and

processes the image data, the EKG waveform data and said exposure marker-in signal, so as to correlate the EKG waveform data with the image data.

26. (original) The system of claim 25, wherein said object is a patient.

27. (original) The system of claim 25, wherein said imaging system is a computed tomography imaging system.

28. (previously presented) The method of claim 1, further comprising:

operating the computed tomography imaging system so as to generate an exposure mark-in signal; and

wherein said communicating an exposure marker-in signal to said electrocardiogram device comprises communicating said generated exposure marker-in signal to said electrocardiogram device.

29. (previously presented) The method of claim 28, wherein:

said generated exposure marker-in signal represents a computed tomography event signal; and

said communicated exposure marker-in signal is communicated so as to overlay the EKG waveform data and indicate the start of a CT scan.

30. (previously presented) The system of claim 24, wherein the data synchronization scheme further,

operates the computed tomography imaging system so as to generate an exposure marker-in signal; and

communicates the generated exposure marker-in signal to said electrocardiogram device such that the generated exposure marker-in signal is associated with the EKG waveform data.